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# Understanding school mobility and mobile pupils in England

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A significant proportion of pupils move school during their school career for reasons other than standard structural moves between educational stages. Little is known about the underlying causes of these moves and the characteristics and experiences of mobile pupils are challenging to research. There is currently a large disconnect between the macro level of system structures, data and policy and the individual experiences and journeys of mobile pupils. This article brings together international literature around school mobility and mobile pupils, with analyses of the English National Pupil Database (NPD), tracking a cohort from age 5 to 16, to better understand when school moves occur and the characteristics of mobile pupils. Findings reveal a sizable underlying rate of moves in England of about 1.5–2% per term and identify differences in mobility related to disadvantage, school phase, ethnic group and SEND status. The predictive power of the data, however, is low, highlighting the need for more research, policy and practice in this area to better understand individual mobility circumstances. By bringing together the literature and the data, the article concludes with a discussion of what is known about school mobility and recommends further areas for research into the characteristics, experiences and outcomes of mobile school pupils.

**Keywords:** England; mobility; national pupil database; pupil school mobility; school census; social disadvantage

## Introduction

Pupil school mobility is a complex phenomenon, which affects a significant proportion of the school population in England and internationally. Pupil school mobility refers to children changing schools within or between academic years (i.e. non-structural moves for reasons other than promotion; Scherrer, 2013). High levels of pupil school mobility have been highlighted as an issue for the individual children as well as for schools and remaining non-mobile children (Rumberger, 2003; Gibbons & Telhaj, 2011; Whitesell *et al.*, 2016). In England, the current Ofsted school inspections handbook (Ofsted, 2019) includes pupil mobility as part of the risk assessment of schools, illustrating that mobility is most often conceived of as a problem (Bull & Gilbert, 2007). Academic studies have to a larger degree focused on the individual child level, where the picture may be more varied. Rumberger (2003) and

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Rumberger *et al.,* (1999) have identified two different types of mobility: strategic (to seek a better educational placement) and reactive (to escape intolerable social or academic situations), and argued that the impact of mobility is closely linked to the circumstances under which it was undertaken.

In the UK, Dobson (2008) has defined pupil mobility as 'a child joining or leaving a school at a point other than the normal age at which children start or finish their education at that school, whether or not this involves a move of home' (p. 301) and Strand and Demie (2006) as the 'movement between or changes of school, either once or on repeated occasions, at times other than the normal age at which children start or finish their education at a school' (p. 551). As these definitions show, pupil school mobility is generally understood as exceptions to 'normal' entries, exits or transitions (e.g. from primary to secondary school). However, within this broad conceptualisation, there are a number of additional variables, which are of key importance when trying to understand the causes and effects of pupil school mobility.

One such variable is whether the non-structural moves take place mid-year or at the end of a given year. The former may potentially indicate exclusions, and thus be disproportionally linked to disadvantage and 'off-rolling' (Bradbury, 2018). Another important variable is linked to the number of times individual children have moved in the course of their education, as frequently moving and 'boomerang students' (Bull & Gilbert, 2007) may face particular challenges. Finally, while neo-liberal approaches to mobility often emphasise the benefits of strategic mobility, research has shown that disadvantaged students may be limited in their choices and be more likely to move for reactive reasons (Dobson, 2008). This emphasises the importance of understanding the socio-economic and other background characteristics of mobile pupils and exploring their particular patterns of mobility on a continuous basis.

In this study, we begin to address some of these complexities by providing a current analysis of pupil school mobility in England and identifying areas for further research. Pupil mobility has been recognised as an issue affecting UK schools, particularly in the London area (Demie, 2002; Demie *et al.,* 2005; London Councils, 2016), but the bulk of academic research regarding the level of pupil mobility and characteristics of mobile pupils has been carried out in the 2000s (Dobson & Stillwell, 2000; Ofsted, 2002; Strand, 2002, 2007; Strand & Demie, 2006; Dobson, 2008). There is thus a significant need for updating and expanding this work, particularly following almost 10 years of austerity policies, a significant increase in child poverty (Children's Commissioner, 2020) and the ever-increasing marketisation of the English education sector, which is strongly based on ideas of market choice and strategic mobility.

The article first discusses several related strands of the international literature on pupil school mobility, focusing on three key areas: (1) the characteristics of mobile pupils; (2) school mobility and pupil outcomes; and (3) the nature and causes of pupil school mobility. We then present descriptive analyses of the English National Pupil Database (NPD), combined with termly school census data in which we track a cohort of pupils ($n$ = 525,396) from the second (Spring) term of Year 1 (age 5–6) to the end of Key Stage 4 (age 15–16), when pupils complete their national General Certificate of Secondary Education (GCSE) examinations. The main aims of the article are to:

- Examine patterns of mobility during the cohort's school career.

- Investigate commonalities and variation in the characteristics of mobile pupils, including intersections between different characteristics, and explore whether particular groups of pupils are more likely to be mobile across schools than others.

In the final section, we bring together our analyses with the literature to discuss what is further needed to understand the diverse experiences and outcomes of mobile school pupils, and what constitutes the most pressing and promising areas for future research.

## Pupil school mobility

### *The characteristics of mobile pupils*

The literature on pupil school mobility has, as noted by Machin *et al.,* (2006), generally concentrated on two areas of interest: (1) describing mobility patterns and analysing them in relation to pupil characteristics and (2) investigating the link between mobility and achievement.

With regards to the first point, a strong link has been found between pupil mobility and economic disadvantage (Machin *et al.,* 2006; Strand & Demie, 2006; Herbers *et al.,* 2013). Furthermore, in the UK, children with Special Educational Needs and Disabilities (SEND) have been found to be more mobile than children without SEND, and so have children who belong to a minority ethnic group or have a language other than English as their first language. Evidence in this area suggests that the latter two categories are more relevant at primary than secondary school level (Machin *et al.,* 2006). Migrant children have also been identified as more mobile than non-migrant children (Jivraj *et al.,* 2012), but as the UK school census data does not include direct information about children's migration status, findings have to rely on proxy indicators (such as late entries into the system), which may not capture all migrant students. Moreover, as Scherrer (2013) points out in the US context, some large datasets do not include information on late entrants at all, risking excluding migrants and underestimating the effects of mobility.

With regards to pupil school mobility and age, the literature has generally identified a higher level of mobility in primary than secondary schools (Ofsted, 2002; Machin *et al.,* 2006; Dobson, 2008). Dobson (2008) explains this by the fact that most child migration occurs at age 0–4 and that households often move during the early stages of family formation and expansion, and then gradually become more settled and stable. Older children are better able to travel longer distances and thus may remain in the same school even though the family moves. This is important, as a residential move combined with a school move is often more problematic than the residential move alone (Hutchings *et al.,* 2013).

### *School mobility and pupil outcomes*

A vast number of studies have explored the impact of pupil school mobility on academic progress and outcomes. Studies have generally found a negative correlation between achievement and mobility, and in particular with multi-mobility (Leckie, 2009; Herbers *et al.,* 2013; Hutchings *et al.,* 2013). However, findings are not

unequivocal (Anderson and Leventhal, 2017) and several studies have also pointed out that the link between mobility and low achievement is not straightforward, as it is very difficult to isolate mobility from pre-existing and long-term factors associated with deprivation and low income, which are also strongly correlated with mobility (Pribesh & Downey, 1999; Dobson & Pooley, 2004; Bull & Gilbert, 2007; Cordes *et al.,* 2019). For example, in a study of a London Local Educational Authority (LEA), Strand and Demie (2006) identified a strong association between pupil mobility and low attainment at the end of key stage tests, but also found that this was reduced by half when other pupil background characteristics (e.g. SEND and socio-economic disadvantage) were controlled for. Furthermore, the difference was almost entirely eliminated 'when account is also taken of pupils' prior attainment as indicated by end of KS1 test scores at age 7'; they therefore conclude that 'there is no indication that changing school has a negative impact on educational progress during primary school' (p. 551). However, in a related study (Strand & Demie, 2007) of secondary schools in the same LEA, a stronger negative impact of mobility was identified. Other studies have similarly found that the link between mobility and lower achievement increases with educational stage (Herbers *et al.,* 2013; Anderson, 2017), illustrating the importance of investigating pupil school mobility over the full educational trajectory of children.

### *Nature and causes of pupil school mobility*

Children move schools for different reasons, and the impact of mobility on their education may depend on the circumstances under which it was undertaken (Rumberger, 2003; Hutchings *et al.,* 2013). The National College for School Leadership (2011) describe two major reasons for mobility: (1) *due to parent or family relocation*, including moving to escape hardship, advance their circumstances or follow the work of the family wage earner and (2) *to meet educational needs*, for example referring to pupils who transfer schools because their previous school has identified a learning or behavioural concern. However, in addition to these family and child-related rationales for mobility, the report also cites evidence that external factors, such as local authority housing policies, may contribute to unnecessary pupil mobility, for example for asylum-seeking families and economic migrants (p. 44). Dobson (2008) similarly links high levels of pupil mobility in city schools with low-quality and temporary accommodation, emphasising the previously established link between mobility and social deprivation.

While these studies predominantly focus on child or family-induced mobility, others have mentioned the importance of also considering school-induced mobility (Welsh, 2019). Rumberger (2015) has provided a useful typology of different types of pupil school mobilities, which includes both student/family and school-initiated moves and furthermore distinguishes between voluntary and involuntary moves. Examples of voluntary mobility include family moves for better employment or educational choice (student/family initiated) and various kinds of transfers (school initiated). Involuntary mobility, in contrast, may include family moves due to unemployment or changing family circumstances, such as divorce or bereavement (student/family initiated) and school closures, overcrowding and exclusion (school initiated). Rumberger (2015) also highlight the importance of considering whether

mobility takes place between school years or during a school year, with the latter likely to be more disruptive to the child's education.

In addition to the distinction between voluntary vs. involuntary and child/family vs. school-induced mobility, Dobson and Pooley (2004) and Dobson (2008) have added the distinction between international migration and internal migration in their conceptualisation of pupil mobility in Blackpool and London, noting that one type may 'transmute' into another. This is supported by Jivrah *et al.,* (2012), who acknowledge that recently arrived migrants tend to be more mobile than established migrants and non-migrants, at least for a time after their arrival, because they do not have 'stable resources, knowledge of the housing market, and clarity about their own needs in their new location' (p. 492). The difference between international and internal migration is also acknowledged by Strand and Demie (2007), who distinguish between what they call 'mobile-transfer group' (internal migration) and 'mobile-new entrant' (international migration), but do not consider the potential links between the two.

The different types of mobility identified in the literature bring to the fore important questions of agency and choice, and suggest that one of the most pertinent characteristics of a school move may be whether it is elective, and with whom the decision lies. In some cases, parental socio-economic mobility may bring about pupil school mobility that is actively chosen, but school mobility may also be involuntary and enforced by socio-economic deprivation, housing or migration policies. As noted by Dauter and Fuller (2016), there are two key approaches to mobility, one which sees movement as an expression of social reproduction and emphasises the links between mobility, low achievement and drop-out, and another—the 'movement-as-market-choice perspective'—which focuses on strategic choices of families to move to better-performing schools. As this section has shown, the extent to which mobility can be considered one or the other strongly depends on the circumstances of the move, and it is likely that the effects on achievement and educational outcomes are similarly linked to the extent to which the move was active and strategic or more reactive and enforced. Current research, however, does not allow for any firm conclusions about the link between mobile pupil characteristics, their educational outcomes and the reason for their mobility, as available data generally does not distinguish different types of mobility.

## The present study

To provide a current analysis of pupil school mobility in England, the present study explored the links between student characteristics and mobility and the impact of mobility on the achievement of different groups of pupils. There are several reasons why an up-to-date analysis of pupil mobility in England is required. First, school policies have changed significantly in the last decades through increased marketisation, competition between schools, diversification of school types and extended 'school choice' (Courtney, 2015; Wilkins, 2015). Dobson and Pooley (2004) and Dobson (2008) have challenged the notion of 'school choice' in relation to mobile students, as their school options are often limited by personal, social, economic and political circumstances (Dobson & Pooley, 2004). Furthermore, increasing concern

with 'off-rolling' of vulnerable students to prevent them from negatively impacting school league tables shows that marketisation and competition may also have an impact on pupil mobility (Nye, 2018; McShane, 2020). In addition to these systemic changes, almost 10 years of austerity have impacted significantly on school and local authority budgets, as well as the finances of many families in the UK (Ridge, 2013; Harrison, 2020). Considering the link between mobility and deprivation, it is thus essential that data on pupil school mobility is updated to understand any potential knock-on effects on children and their education. This article discusses the first element of our study: the identification of mobile pupils and their characteristics. It is meant to form a background for a critical discussion of pupil school mobility in the UK and its effect on children, but we recognise that many questions are left unanswered by our analytical approach. The discussion part of the article thus not only discusses our findings, but also outlines our suggestions for further quantitative and qualitative research in this field. The specific impact of mobility on achievement (the second element of the study) will be discussed in a separate article (Perry & Jørgensen, under development).

## Methods

### *Data sources and overview of analysis*

The NPD and the Department for Education (DfE) termly school census data was examined over an 11-year period to understand the frequency and timing of school moves and the characteristics of mobile pupils. The NPD and school census data are national datasets routinely collected for all English state-maintained schools (c. 93% of all schools) and used for purposes of administration and school accountability. The termly school census record contains details of the school at which pupils are registered across the 32-term period. We tracked a national cohort ($n$ = 525,396) who started Year 1 (age 5–6) in the 2006–7 academic year (September–August) and examined matched termly school census records from the Spring term of their first year until the same pupils reached the final Summer term in Year 11 (age 15–16) in 2016–17; this put us in a position to identify all school moves across the age 5–16 school career for these pupils. School census data also includes details of the pupils' characteristics, including Free School Meals (FSM) eligibility status (a commonly used indicator of disadvantage), ethnicity category and SEND status. The DfE kindly permitted the data extract to contain a variable flagging the children of armed service personnel, as this is a known high-mobility group. Finally, we obtained data from exclusion records. This extract contained data for all fixed-term and permanent exclusions,[1] but in this research only the number of permanent exclusions for each pupil across the period were included.

With this data we produced a range of descriptive statistics relating to the number of school moves, and the characteristics of mobile pupils. These range from simple tabulations and frequency plots, through cross-tabulations presenting bivariate comparisons of mobility groups with pupil characteristics, to multivariate analysis, including an ordered logistic regression examining which pupil characteristics predict greater rates of mobility. We provide further analytical details in the relevant results

sections below. Before proceeding to the results, we provide a brief overview of the key variables used within the analysis.

### *Variables used in the analysis*

Our mobility variable was a simple count of the number of school moves from the Spring term of Year 1 to the Summer term of Year 11. We also had the Spring-term census for the previous Reception year, a non-compulsory school starting year attended by the vast majority of children, which we used as the comparison point for the first data point (Spring Year 1) in our termly series. We calculated a dummy variable (1 or 0) for each term, flagging whether pupils' registered school local authority and establishment number (LAESTAB) codes were the same as per the previous term. We then produced three aggregated variables for the total number of moves for (i) primary (Year 1 to 6), (ii) secondary (Year 7 to 11) and (iii) across the entire period.

We had several variables pertaining to school characteristics to distinguish non-structural from structural moves. (1) Middle-school status (middle, deemed primary and middle, deemed secondary are recorded, but we conflated these for the analysis). English middle schools typically take students from age 9–10 (Year 5) to age 12–13 (Year 8), although some run from age 9 to 12, 10 to 13 or, less typically, other ranges. (2) 'All-through' schools, covering the full age range, a number of which are schools for pupils with special educational needs. (3) Pupil referral unit (PRU) status—alternative education provision schools which cater for pupils who are not able to attend mainstream schools, including pupils who have been excluded from school, pupils unable to attend schools for medical reasons and pupils such as asylum seekers and refugees who temporarily have no school place. (4) Special schools with educational provision for children with a special educational need or disability.

Our data also included extensive pupil-level data: (1) gender; (2) first language status—English, 'other' or a small proportion of 'unclear' or missing values; (3) number of permanent exclusions across the time period, of which 4,704 out of 4,865 non-zero entries recorded a single permanent exclusion, a small number were excluded twice and very few were excluded three times (exact numbers suppressed for data security); (4) ethnicity, using one of 18 official categories (detailed further below); (5) status as a child of an armed services family, a group known for greater rates of mobility; (6) FSM eligibility status as an indicator of disadvantage—we counted the number of times the pupil was eligible across all 32 termly census records and created an ordinal variable with five groups (0, 1 to 10, 11 to 20, 21 to 30, 31 to 32 terms on FSM status); (7) special educational needs status, recorded with and without a Statement of Special Educational Needs (or Education Health and Care Plan, which is a legal document setting out the individual's needs and required provision). For all data housed in the census records, we were able to minimise the rates of missing data by looking across all records for missing items, taking the first non-missing entry recorded as the value for use in our analyses. Overall, we had records for 525,396 individual pupils. Multivariate analyses using all data items were based on the 480,353 records for which we had complete data.

## Results

### *Frequency and timings of school moves*

Our first aim was to examine the overall counts for school moves across the cohort. Figure 1 shows the percentage of the cohort with each level of school moves and Figures 2 and 3 show the figures separately for the primary and secondary school stages.

Apart from a very small number of pupils (0.2%) attending all-through schools, all pupils in the cohort moved school at least once. The first move in the vast majority of cases therefore represents the move from primary to secondary school, which is structural and outside the common definition of pupil school mobility. Approximately 32.3% of the cohort moved school twice, and 22.2% three or more times. Across the 32 terms representing about 11 years of schooling, 237 pupils had 11 or more moves and 28 pupils had 14 or more. The maximum number of moves was 19, but given the small figures for children moving nine times or more, these were collated.

The figures for mobility across the two educational stages show an underlying, but variable, level of mobility punctuated by larger rates corresponding to structural move points. The largest structural move was in the Autumn term of Year 7 (the primary to secondary-phase transition), where 461,043 young people moved schools, representing 87.8% of the cohort. This move is not shown on the figure to avoid dwarfing the other data points. Other apparent structural points are: (1) Spring Year 1, which captures changes compared to the Spring term of the Reception year; (2) Autumn Year 3, where the primary age range is often split into infant (Reception to Year 2, age 4–7) and junior (Year 3–6, age 7–11) phases, sometimes across separate institutions (and therefore would be flagged as a move in our data), albeit often on the same school site; (3) Autumn Year 5, the entry for many middle schools; (4) Autumn Year 9 and, to a lesser extent, Year 8 and 10, which are starting points for upper (or high) schools for instances where a two- or three-tier system is in place. The data also suggests there is a higher rate in Spring Year 7, suggesting a 'false start' in secondary school or early relocation to a preferable school choice.

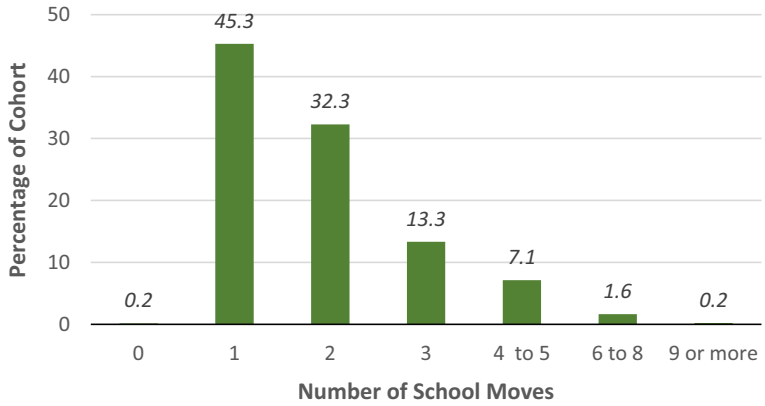


Figure 1. Number of school moves from Year 1 (age 5–6) to Year 11 (age 15–16) for the 2006–7 Year 1 cohort ($n$ = 525,396) [Colour figure can be viewed at wileyonlinelibrary.com]

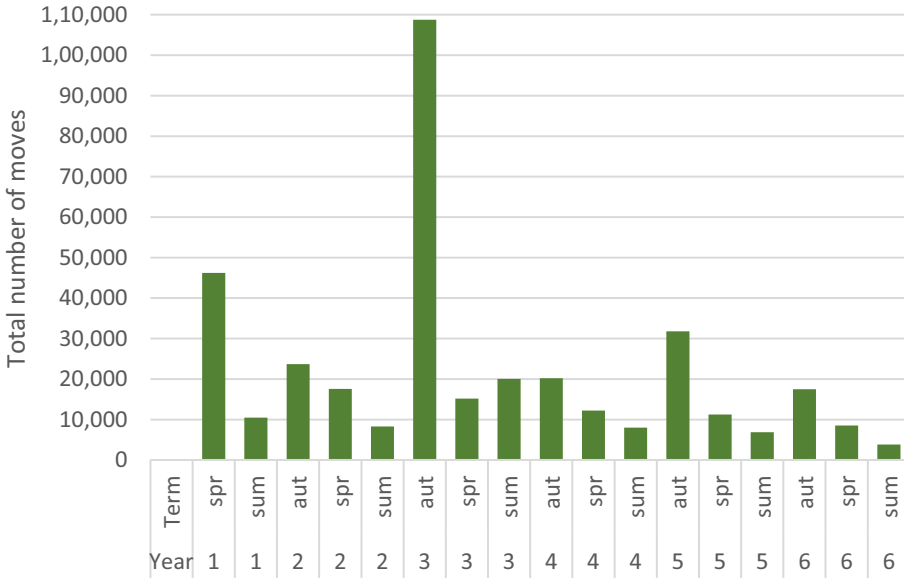


Figure 2. Number of moves during primary age range. [Colour figure can be viewed at wile yonlinelibrary.com]

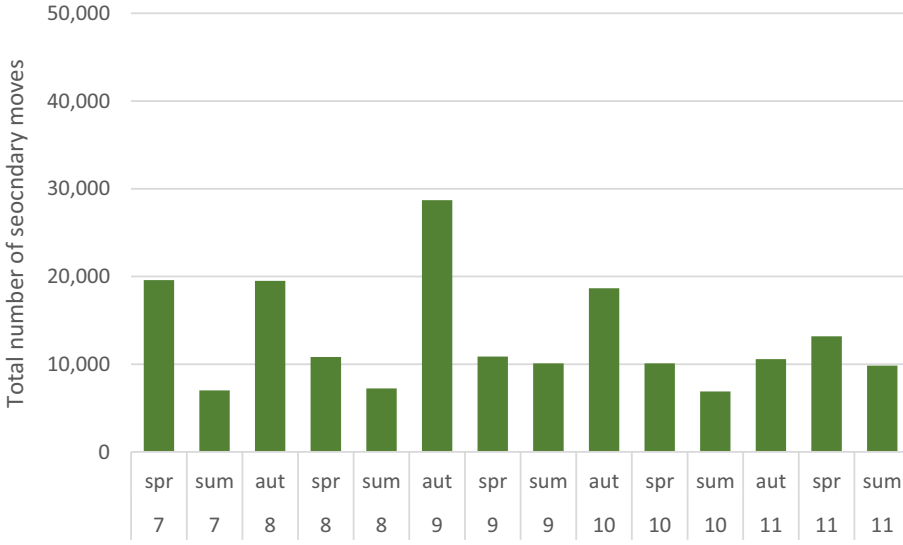


Figure 3. Number of moves during secondary age range[1].
[1]Not including the first Autumn term in Year 7, where there were 461,043 moves. *Source:* ONS.
[Colour figure can be viewed at wileyonlinelibrary.com]

Outside of these—ostensibly structural—moves, there is a consistent rate of moves ranging from 3,823 (Summer Year 6) to 20,207 (Autumn Year 4), typically in the 7,000–11,000 range, representing about 1.5–2% of the cohort. As

discussed during the literature review, the factors leading to school moves are various and administrative data rarely record reasons for school moves. With the exception of structural moves, instances of school exclusion, or where a pupil moves to a PRU, the reasons behind school moves are often unclear from the data. However, the extent of mid-year mobility (indicated by Spring and Summer term moves) shows that non-structural mobility affects a significant percentage of the school cohort. In addition, the relatively high number of students moving school just before the end of their educational stage (Spring Year 6: 8,547; Summer Year 6: 3,823; Spring Year 11: 13,176; Summer Year 11: 9,846) may be of particular concern.

### *Rates of mobility by pupil characteristics and groups*

Our second research aim was to examine the characteristics of mobile pupils and whether certain characteristics are associated with greater or fewer school moves. Table 1 gives the percentage of pupils at each level of mobility for the pupil and school characteristics recorded in the data. Note that the percentage totals after each variable give the proportion of the overall cohort of 525,396 in the particular group.

Further, Table 2 provides rates of mobility by language status and ethnic group, as recorded in the school census records. Given the lower numbers of pupils in some

Table 1. Rates of mobility by pupil and school characteristics (%)

| | | Number of moves | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pupil group | | 0 | 1 | 2 | 3 | 4 to 5 | 6 to 8 | 9 or more | Proportion of cohort |
| All | | 0 | 45 | 32 | 13 | 7 | 2 | 0 | 100 |
| Gender | Female | 0 | 46 | 32 | 13 | 7 | 2 | 0 | 48.8 |
| | Male | 0 | 45 | 32 | 13 | 7 | 2 | 0 | 51.2 |
| Permanent exclusion | | *supp* | 1 | 16 | 24 | 36 | 18 | 3 | 0.9 |
| SEND[a] (statement) | | 3 | 30 | 30 | 18 | 14 | 5 | 1 | 4.5 |
| SEND (no statement) | | 0 | 38 | 32 | 16 | 11 | 3 | 0 | 36.7 |
| Armed forces | | *supp* | 25 | 28 | 21 | 20 | 5 | 1 | 1.1 |
| Number of months eligible for FSM[b] | 0 | 0 | 51 | 33 | 11 | 4 | 1 | 0 | 66.3 |
| | 1 to 10 | 0 | 32 | 30 | 18 | 14 | 5 | 1 | 8.7 |
| | 11 to 20 | 0 | 36 | 32 | 17 | 12 | 3 | 0 | 13 |
| | 21 to 30 | 0 | 29 | 29 | 19 | 17 | 6 | 1 | 7.3 |
| | 31+ | 0 | 39 | 32 | 16 | 10 | 2 | 0 | 4.6 |
| Middle school[c] | | 0 | 1 | 51 | 30 | 15 | 2 | 0 | 3 |
| PRU[c] | | *supp*[d] | *supp* | 16 | 24 | 36 | 20 | 4 | 1.8 |
| Special school[c] | | 6 | 26 | 28 | 18 | 16 | 6 | 1 | 2.1 |

[a]SEND with and without a Statement of Special Educational Needs or Education Health and Care Plan (EHCP).
[b]Free School Meals—an indicator of economic disadvantage based on parental income.
[c]Pupil has at least one term recorded at (a) a middle school, (b) a special school or (c) a pupil referral unit (see methods).
[d]Low numbers suppressed in original counts to avoid disclosure.
*Source:* ONS.

Table 2. Rates of mobility by pupil language and ethnicity (%)

| | Number of moves | | | | |
|---|---|---|---|---|---|
| | 0 to 1 | 2 | 3 | 4 or more | Proportion of cohort |
| Total | 45 | 32 | 13 | 9 | 100 |
| First language | | | | | |
| English language | 45 | 32 | 13 | 9 | 86 |
| Other first language | 47 | 31 | 13 | 8 | 13.8 |
| Ethnic group | | | | | |
| Bangladeshi | 50 | 31 | 12 | 7 | 1.6 |
| Indian | 47 | 34 | 13 | 6 | 2.4 |
| Pakistani | 48 | 32 | 12 | 7 | 3.9 |
| Any other Asian background | 45 | 30 | 15 | 9 | 1.1 |
| Black African | 41 | 31 | 16 | 13 | 2.6 |
| Black Caribbean | 44 | 29 | 14 | 12 | 1.4 |
| Any other Black background | 43 | 28 | 16 | 13 | 0.5 |
| Chinese | 48 | 32 | 13 | 7 | 0.3 |
| White and Asian | 45 | 32 | 12 | 10 | 0.8 |
| White and Black African | 39 | 32 | 16 | 13 | 0.4 |
| White and Black Caribbean | 41 | 31 | 14 | 14 | 1.2 |
| Any other mixed background | 43 | 31 | 14 | 12 | 1.4 |
| White British | 45 | 33 | 13 | 9 | 75 |
| White Irish | 55 | 25 | 10 | 9 | 0.3 |
| Any other White background | 49 | 29 | 14 | 9 | 3.3 |
| Traveller of Irish heritage | 22 | 17 | 19 | 42 | 0.1 |
| Gypsy/Roma | 25 | 26 | 16 | 34 | 0.1 |
| Any other ethnic group | 45 | 29 | 15 | 11 | 1.3 |
| Refused | 44 | 32 | 14 | 10 | 0.7 |
| Information not yet obtained | 45 | 32 | 13 | 11 | 0.6 |

*Source:* ONS.

groups, mobility is grouped into four levels: 0 to 1 move, 2 moves, 3 moves and 4 or more moves.

The numbers in Tables 1 and 2 are all based on simple bivariate cross-tabulations. It is likely, however, that many factors are acting simultaneously. To examine this and identify the strongest predictors of mobility, we conducted an ordinal logistic regression. This is a multivariate analysis which produces a prediction model linking predictor variables to categories via a prediction equation with cut-off points. Output from this analysis is presented in Table 3. We analysed primary moves and secondary moves separately to identify any differences by phase.

Looking across both the bivariate and multivariate results, we draw out several notable findings: first, FSM status is positively associated with mobility, supporting findings from previous research that links low income and deprivation to higher levels of mobility (Machin *et al.*, 2006; Strand & Demie, 2006; Herbers *et al.*, 2013). The relationship, however, is non-linear; there is a gradual increase in mobility rate with more terms of FSM eligibility, with the exception of pupils who were eligible for 31 or more terms out of 32, who had only a slightly elevated rate relative to never-eligible

Table 3. Ordinal logistic regression of mobility group on selected[a] pupil characteristics ($n$ = 480,353)

| | | Primary | | Secondary | |
|---|---|---|---|---|---|
| | | Coefficient | SE | Coefficient | SE |
| Number of terms eligible for FSM (relative to 0 months) | 1 to 10 | 0.47 | 0.01 | 0.46 | 0.01 |
| | 11 to 20 | 0.57 | 0.01 | 0.58 | 0.01 |
| | 21 to 30 | 0.69 | 0.01 | 0.70 | 0.01 |
| | 31+ | 0.21 | 0.01 | 0.24 | 0.02 |
| Number of permanent exclusions (relative to 0 exclusions) | 1 | 0.23 | 0.03 | 2.26 | 0.03 |
| | 2 | 0.94 | 0.18 | 3.34 | 0.16 |
| | 3 | 2.76 | 1.14 | 1.36 | 1.28 |
| Other pupil | characteristics | Gender male | −0.04 | 0.01 | −0.18 |
| | 0.01 | | | | |
| | SEND statement | 0.15 | 0.02 | 0.10 | 0.02 |
| | SEND no statement | 0.08 | 0.01 | 0.29 | 0.01 |
| | Armed services | 1.25 | 0.03 | 0.59 | 0.03 |
| Special school (1+ term) | 0.22 | 0.03 | −1.37 | 0.04 | |
| Ethnic group (coefficients relative to White British)[b] | Bangladeshi | −0.09 | | −0.17 | |
| | Indian | 0.29 | 0.03 | −0.04 | 0.04 |
| | Asian other | 0.41 | 0.04 | −0.08 | 0.05 |
| | Pakistani | −0.15 | 0.03 | 0.12 | 0.04 |
| | Black African | 0.24 | 0.03 | −0.04 | 0.04 |
| | Black Caribbean | −0.18 | 0.04 | −0.13 | 0.05 |
| | Black other | 0.01 | 0.05 | −0.16 | 0.06 |
| | Chinese | 0.43 | 0.05 | −0.15 | 0.08 |
| | Mixed other | 0.14 | 0.04 | 0.03 | 0.05 |
| | White and Asian | 0.19 | 0.04 | −0.06 | 0.06 |
| | White and Black African | 0.24 | 0.05 | 0.04 | 0.06 |
| | White and Black Caribbean | −0.02 | 0.04 | 0.02 | 0.05 |
| | Information not yet obtained | −0.05 | 0.05 | −0.01 | 0.06 |
| | Other ethnic group | 0.25 | 0.03 | −0.08 | 0.05 |
| | Refused to state | 0.06 | 0.04 | −0.03 | 0.06 |
| | White British | 0.00 | 0.03 | 0.00 | 0.04 |
| | White Irish | −0.17 | 0.06 | −0.13 | 0.08 |
| | Traveller of Irish heritage | 0.53 | 0.17 | 0.40 | 0.19 |
| | White other | 0.18 | 0.03 | −0.10 | 0.04 |
| | Gypsy/Roma | 0.43 | 0.12 | 0.40 | 0.13 |
| First language (coefficients relative to missing category)[b] | Missing | 2.61 | | −0.66 | |
| | English | 0.00 | 0.38 | 0.00 | 0.78 |
| | Other | −0.17 | 0.38 | −0.16 | 0.78 |
| | Unclear | 0.27 | 0.38 | −0.28 | 0.79 |

| | | Coefficient | SE | Difference | Coefficient | SE | Difference |
|---|---|---|---|---|---|---|---|
| These are the cut points for the latent prediction model. Coefficient values can be interpreted in relation to their effect on this prediction equation. | cut point (1) | −2.93 | 0.39 | | 0.24 | 0.79 | |
| | cut point (2) | −1.19 | 0.39 | 1.74 | 6.56 | 0.79 | 6.32 |
| | cut point (3) | 0.19 | 0.39 | 1.38 | 8.46 | 0.79 | 1.9 |
| | cut point (4 to 5) | 1.38 | 0.39 | 1.19 | 9.79 | 0.79 | 1.33 |
| | cut point (6 to 8) | 3.67 | 0.39 | 2.29 | 12.01 | 0.79 | 2.22 |
| | cut point (9+) | 6.93 | 0.44 | 3.26 | 15.22 | 0.81 | 3.21 |
| | (pseudo) $R^2$ | 0.018 | | | 0.083 | | |

[a]Controls for academic attainment were also included: Attainment 8 (KS4), Attainment 8 squared, KS2 English and Maths (both using fine grading), KS2 English and Maths squared.
[b]The comparison category was left as the default (Bangladeshi and Missing). These are, however, not the clearest way of presenting the results. So, for ease of interpretation and comparison across primary and secondary, we have manually adjusted the coefficients to take White-British ethnicity and English language as the comparison categories. This makes all coefficient values relative to an easily interpretable category, but note that the standard errors remain in comparison to the original base category.
*Source:* ONS.

pupils. This illustrates the importance of considering FSM on an ongoing basis rather than as a one-off characteristic.

Second, and unsurprisingly, permanent exclusion was positively associated with school moves. This relationship was stronger at secondary level for pupils with one or two exclusions (recall that very few pupils had received three permanent exclusions), indicating that exclusions are a stronger predictor of moves at secondary level where there are a greater number of permanent exclusions (National Statistics, 2020).

Third, SEND status or special school attendance were found to be only very slight positive predictors of mobility. However, the bivariate results show that students with SEND have a greater spread of mobility outcomes, with greater numbers attending all-through schools (in some cases dedicated special schools) and the remainder more likely to move schools. Furthermore, there is a difference between the primary and secondary results in relation to special schools, suggesting that pupils are more likely to move to a special school during the primary period and less likely to move from a school at which they have settled. To investigate the link between SEND status and pupil mobility further, we conducted logistic regression analyses of SEND status (SEND with and without a statement) on the same predictor variables as used in the main analysis. We excluded pupils attending special schools from the analysis to focus on pupils with SEND who are potentially moving between schools. These analyses confirmed the main results that there were relatively higher rates of children with SEND at all mobility levels other than one move. It also revealed gradually increasing rates of

SEND with no statement as the mobility rate increased (from a small association for two moves to a moderate positive association for nine or more). In contrast, SEND with a statement did not show the same increasing correlation. The association increased to a small positive association from two to three moves, but then was very small between four and eight moves, and nearly zero for nine or more moves. One plausible interpretation is that high mobility is associated with higher rates of SEND, but also hinders the process of securing a statement; however, this is speculative and a more detailed analysis would be needed to rule out other explanations.

Fourth, little difference was associated with gender, and only small differences linked with language status in both bivariate and multivariate analyses. The armed services family variable was found to be a moderate predictor of school moves, particularly in the primary age range.

Fifth, some substantial differences were apparent in the cross-tabulations. The multivariate results were largely in line with these, and also revealed interesting differences between primary and secondary phases. Overall, the results suggest that there are: (1) groups that are slightly less mobile across both phases—Black Caribbean and White Irish; (2) groups that are slightly more mobile in the primary age range—Indian, other Asian background, Black African, other mixed background, mixed White and Asian, mixed White and Black African, and the other ethnic group category; (3) groups that are slightly less mobile in secondary—other Black background; (4) groups that are slightly less mobile in primary but slightly more in secondary—Pakistani; (5) groups that are more mobile in primary but less in secondary—Chinese and other White backgrounds; and finally (6) groups that are significantly more mobile in both phases—travellers of Irish heritage and Gypsy/Roma children. The reasons behind these differences are unclear from the data. One is tempted to speculate about the socio-economic and cultural factors which give rise to these differences, potentially in combination with migration. As we discuss in the concluding part of the article, however, richer data are needed on the part of authorities and researchers to unpick the multiple factors and circumstances around school moves.

A final yet noteworthy result from the ordinal logistic regression is the low (pseudo) $R^2$ statistic. This is a measure of the total variation in the data which can be jointly accounted for by the variables included in the model. In other words, the extent to which the data we have can predict mobility. For the primary model, this figure was 1.8%; at secondary level, it was slightly higher at 8.3%. In both cases, therefore, the predictive power of the model is low to very low: the number of school moves is largely driven by structural factors and pupil circumstances, or characteristics for which we have no data. Future research in this area may benefit from the careful separation of the structural moves from other types, and re-running a similar analysis to identify characteristics associated with non-structural moves. Although, with only 3% of pupils attending middle schools (see Table 1), most of the variation is likely to stem from unobserved factors. In summary, while important differences by ethnic and social group are apparent within these results, the available data raise more questions than answers about the underlying causes of school mobility and the characteristics and circumstances of mobile pupils.

## Discussion

The findings of our study update and extend existing research on pupil school mobility in England. Similar to other studies, we found a correlation between mobility and low income (indicated by FSM). We also identified SEND as a predictor of mobility, and to some extent ethnicity. Our findings, however, show that there is significant within-group variation. For example, by distinguishing between the amount of time children were eligible for FSM, we were able to identify those most likely to live in long-term deprivation. Our findings show that while mobility tends to increase with disadvantage, this did not hold for the most deprived students, whose rates of school movement were in line with the average. In relation to SEND, we also found significant disparity between statemented and non-statemented SEND rates in relation to mobility, which illustrates the importance of nuances within this field. Differences might suggest that the statementing process is hindered by frequent moves, but could also indicate that children requiring a statement are often concentrated between no and two moves. Examining this particular difference further would be valuable in future research, and enhance our understanding of the effects of mobility of children with SEND support or Educational Health Care plans, respectively. Further exploring *when* these two groups of children move school (mid-year vs. end of year or at the end of key stages) compared to other children might also help shed light on some of the circumstances around their mobility, and whether they could be expected to be school-initiated.

Previous research has found that minority ethnic children are more likely to be mobile than majority ethnic children, and our study to some extent supports this finding. However, our detailed analysis of the 18 ethnicity categories in the English school census in relation to mobility also found significant differences between ethnic groups, both in their overall level of mobility and in the more detailed school stage mobility. More research is needed to further explore these patterns. In addition, it would be useful to isolate data from late entries to assess whether migrant students, within different minority ethnic categories, were more likely to be mobile than more settled minority ethnic students.

These points illustrate the importance of more detailed and fine-grained analysis of student characteristics in relation to mobility to enable firmer conclusions about the impact of mobility on students, particularly if cross-tabulated with the number of moves and their specific timing (mid-year vs. end of year). Another area worth investigating quantitatively is the characteristics of the schools which students move from and arrive at (e.g. in relation to their most recent Ofsted report). Analyses which were considered for our study, but not undertaken given the time constraints, were to examine moves in terms of departure and destination schools, and to separate geographically nearby from more distant moves. Both levels of analysis would enable more understanding of the potential diverse patterns of mobility of different groups, and provide insights for the debate between school mobility as social reproduction vs. strategic choice.

Most research on pupil school mobility, including the analysis we present in this article, is quantitative, and pays relatively little attention to the experiences of children and families. As previously noted and emphasised by several others, quantitative

analysis of pupil school mobility provides limited opportunities to explore the underlying reasons for children moving schools (Strand & Demie, 2006; Herbers *et al.,* 2013), even though these are key to understand the way mobility is experienced by children and the impact on their educational outcomes. Acknowledging this, Gruman *et al.,* (2008) have called for more research into children's family context in relation to instances of mobility and investigation of how particular circumstances may be related to positive or negative outcomes. A growing body of qualitative research has explored children's experiences of mobility, particularly in relation to international migration (Dobson, 2009; Moskal & Tyrrell, 2016; Jørgensen, 2017); but with the exception of a few studies (Messiou & Jones, 2015), we know little about children's experiences of internal mobility and how it might link with their educational outcomes. Qualitative research focused on individual cases provides a rich picture, but has typically not been conducive to developing systematic policy and practical responses and understanding. Mixed-methods research exploring characteristics and outcomes of mobile students, along with their experiences and circumstances, thus seems a particularly relevant area for further research.

Mixed methods would also enable research which focuses not only on school characteristics, but also on their specific approaches to mobility. As pointed out by Ofsted (2002) in a relatively dated report, dealing with a new intake of pupils is time-consuming and involves a range of tasks, such as interviews with parents and pupils, updating of records, organisation of induction and providing equipment and materials. These may be especially demanding when schools have to deal with 'a steady trickle of newcomers from insecure and disadvantaged backgrounds', who may be emotionally unsettled, have special educational needs or little prior experience of schooling (Ofsted, 2002: 6). However, highly mobile schools may also develop particular strategies for working with mobile populations, which could usefully be shared with other schools less experienced in this area. Combining qualitative and quantitative insights to explore the role of schools might also help schools document the work they do, which, as Dobson and Pooley (2004) recommend, should be recognised also in terms of funding.

## Conclusion

Despite being an important issue in the English school system, pupil school mobility remains an evolving area for research. Several studies have sought to explore the link between mobility and child characteristics, and whether pupil mobility matters in relation to school attainment and school functioning (Dobson *et al.,* 2000; Demie, 2002; Strand, 2002). Our research has shown that pupil mobility is a highly complex area, with many intersecting and contextual variables. This article has discussed some of these and illustrated important variations within groups (e.g. children eligible for FSM, children with SEND and minority ethnic children) in terms of mobility rates. Acknowledging that these only partially explain mobility patterns, the article has also considered implications for further research, particularly the importance of combining student characteristics with the timing and extent of mobility and school indicators, as well as more in-depth analysis of family and school circumstances around the time of the move and children's particular experiences.

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NOTE

[1] A fixed-term exclusion involves children being excluded from the school for up to 45 days due to misbehaviour in or outside of school. Permanent exclusion involves the child being expelled from school, following which the LEA will have to arrange alternative provision (www.gov.uk/school-discipline-exclusions/exclusions).

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